

Malt Beverage Having Stabilized Flavor and Methods of Production Thereof

ABSTRACT

5 The present invention is directed to a method for stabilizing the flavor of
a fermented malt beverage, most particularly a beer, by the addition of one or
more inhibitors, blockers, reducing agents or binding agents that inactivate one or
10 more Maillard reaction intermediates that induce staling of the flavor of fermented
malt beverages. In preferred such methods, the agents used are reductase
enzymes, especially aldehyde reductases, carbonyl reductases, aldose reductases,
oxoaldehyde reductases and most particularly oxidoreductases such as isozymes
of Old Yellow Enzyme (*e.g.*, OYE1 and OYE2). The invention is also directed
15 to the fermented malt beverage prepared by such a method, and to the use during
the brewing process of reductase enzymes from naturally occurring sources,
including those produced by yeasts, to stabilize the flavor of the resulting beer
product and to produce a beer having a stable flavor. The invention also relates
to cells which have been specifically modified, selected, or genetically engineered
20 to express or secrete a reductase enzyme which may be used during the brewing
process to stabilize the flavor of the resulting beer product and to produce a beer
having a stable flavor. The invention also provides fermented malt beverages
having enhanced flavor stability produced by these methods.